2: Castetter and Opler N, E-5 (1931-1934)1936
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CHIRICAHUA
MESCALERO

food. The fruits of the hedgehog cactus *(Echinocereus coccineus)*, the salmon-flowered hedgehog *(E. lecanus)*, the desert strawberry *(E. fendleri)*, the golden spined strawberry *(E. chrysocentrus)*, and the rainbow cactus *(E. rigidissimus)* were gathered occasionally and eaten fresh. Several species of *Neomammillaria*, including the sunset cactus *(N. grahami)*, the snowball pincushion *(N. olivia)*, and the horned toad cactus *(N. mainae)* were at times eaten without preparation, although fruits of the sunset cactus were often dried and stored for winter use, when they were cooked before being eaten. 252 262 137 [251]

Mesquite *(Prosopis glandulosa)* is one of the most widespread and best known plants of the Southwest and its sweet, nutritious fruits have been and still are rather extensively used as a source of food. The beans of the mesquite were gathered, boiled, pounded on a hide or ground on a metate, the mixture placed in a pan and worked with the hands until it attained a thick consistency. Formerly the raw beans were ground on a metate into flour, at present a meat grinder is used for this purpose. In either case the seed coats were winnowed from the flour. The mesquite flour was usually made into bread as well as into a sort of pancake, which these Indians regarded as most delicious. Frequently the beans were cooked with meat, and the seed coats spit out as the combination was eaten. Gregg *(8:*102), evidently referring to these Apache of New Mexico, wrote that the mesquite pod was ground for flour with which to make their favorite pinole. 252 262 [412] [404] [178]

Occasionally the pods containing the seeds were boiled in water until the mixture turned red, after which the pods were taken out and mashed by hand, then put back in the container and boiled again until the water had been almost all boiled off. This constituted a sort of pudding.

Similarly the yellow fruits of the screw bean or tornillo *(Strombocarpa pubescens)* were extensively gathered, dried, and stored in sacks. The pods, which are somewhat sweeter than those of the mesquite, might be chewed and eaten raw as a delicacy but they were more commonly dried, [139] [251]

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291 (women never wear the low-cut type) complete the costume. These moccasins often have the upturned toe.

302 Young women, and many middle-aged women too, part the hair, draw it together at the back, wrap it up in a knot at the nape, tie it, and cover it with an hour-glass-shaped hide form. Older women tend to wear their hair hanging loosely; "but, if it is in their way, they fix it up too." As a woman advances in age, she devotes less attention to hair-grooming, though there is great individual variation in the time at which these changes take place. Though some rather young women have the hair loose, a really old woman is never seen wearing the hair form.

Face-painting of women follows the conventions noted for men. Women tattoo also. In addition to tattoo markings on the 304 arms, they place a dot on either cheek and often a figure, such as [531] a circle or a wavy or serrated line, on the forehead. One in- [178] formant insisted that the facial tattooing of the women is an innovation.

301 Women, like men, make lavish use of pendants and ornaments 789 of stone, shell, and other materials; and many of these objects, too, are really amulets.

291 Very young children, particularly when the weather is mild, are burdened with little or no clothing. They play around the 855 camps happy and unkempt. "It seems as though washing their [857] hands and washing themselves is foreign to them." When clothes [515] are made for them, the garments are modeled after those worn by adults. Sometimes a child's hair is gathered at the sides and 302 "tied in two bundles." But most often, until the girl assumes the 855 hair form and the boy the headband, the hair is left to hang 824 loosely. For protection from the sun, both young people and 751 adults wear wreaths of fresh willow.

342 The home in which the family lives is made by the women and [462] is ordinarily a circular, dome-shaped brush dwelling, with the floor at ground level. It is seven feet high at the center and ap- [824] proximately eight feet in diameter. To build it, long fresh poles of oak or willow are driven into the ground or placed in holes [412] made with a digging-stick. These poles, which form the frame- [283] work, are arranged at one-foot intervals and are bound together

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at the top with yucca-leaf strands. Over them a thatching of bundles of big bluestem grass or bear grass is tied, shingle style, with yucca strings. A smoke hole opens above a central fireplace. A hide, suspended at the entrance, is fixed on a cross-beam so that it may be swung forward or backward. The doorway may face in any direction. For waterproofing, pieces of hide are thrown over the outer thatching, and in rainy weather, if a fire is not needed, even the smoke hole is covered. In warm, dry weather much of the outer roofing is stripped off. It takes approximately three days to erect a sturdy dwelling of this type. These houses are "warm and comfortable, even though there is a big snow."

The interior is lined with brush and grass beds over which robes are spread. Household equipment is utilitarian and minimal. Basketry receptacles include coiled shallow trays, large twined burden baskets for gathering wild foods, and pitch-covered woven water containers. There may be a few clay pots, unpainted and only occasionally incised. There are gourd cups and hide, gourd, and wooden dishes. Surplus food and clothing are stored in undecorated, envelope-like hide receptacles (parfleches). Ready for use are a metate and a cigar-shaped mano (as often as not of ancient Pueblo manufacture), stone and bone pounders, an awl, rawhide or horsetail hair ropes and tumplines, a fire drill, and combs made of dried and folded grass or mescal leaf.

In or around the camp are objects connected with horsemanship—saddles, bridles, bits, quirts, and saddlebags. Conspicuous, too, are weapons of war and chase—the bow and arrows, quiver, bow cover, shield, wrist guard, spear, sling, flint knives, and clubs.

Ceremonial objects—the pottery drum, a deer- or elk-hoof rattle, buckskin bags of pollen and other sacred substances, and the particular paraphernalia attached to the rites of the individuals of the household—are present but are less likely to be displayed.

The dwelling may contain a musical instrument or two not

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526 prize. Someone is blindfolded, and an arrow is stuck in the ground far from him. If he finds the arrow, he is allowed to retain it. "They sometimes stick several arrows in the ground. If he finds one, all the rest belong to him."

524 Children play a game that may be likened to "heads and tails," using a bone with sides distinguished from each other by shape or color. Sometimes the bone is spit upon and the sides are called "wet" and "dry." If the side he has named shows uppermost, the player in possession of the bone wins the throw and retains the bone. Otherwise the bone changes hands. Today the [178] game is played with a metal knife that has a handle rough on one • [412] side and smooth on the other.

526 In an exciting ball game a member of one side throws a buckskin ball to a member of the opposition who is standing with his team mates in a large circle or safety zone. This individual hits the ball with his hand, and he or one of his team mates must then run to another safety zone some distance away. The side of the thrower tries to retrieve the ball and hit the runner with it before he reaches the other circle. Should the runner be struck, his opponents make a rush for the safety zones, while he and his helpers try to recover the ball and strike one of the other team with it before he gains the circle. After the exchange, when the "ins" and "outs" are decided, the round of pitching and batting starts again.

524 The boys sometimes make clay marbles and dry them in the sun or near the fire, but often round stones are used instead. In one marble game a row of holes is scooped out. The order of play is determined by seeing who can roll a marble closest to a line. The object of the game is to roll the marble into each of the holes. A successful play for the first hole entitles the player to try for the second. When the row of holes has been traversed, the player must play in the opposite direction and come back to the starting-point. The first one to accomplish this is the winner. Instead of throwing directly toward a hole, a player is entitled to try to knock a competitor out of the way. If he strikes the marble at which he aims, he is allowed another throw for the hole.

Another marble game calls for four players, sitting around a

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When the stalks are just coming up and are going to blossom, we go to a place 252
where the mescal is plentiful and dig a pit in about the center of the region in which we are going to get the plants. They are big and heavy, and we don't want to carry them farther than we have to. If men are along, they dig the pit while the women start bringing in the plants. There has to be plenty of wood too and some big flat rocks. If the plants are scattered and a long way from the pit, the woman uses a horse to carry them in.

The woman has an oak stick about three feet long, sharpened at the end like a [412]•
chisel. She drives this at the lower part [at the stem below the crown], pounding it with a rock, and it [the crown] rolls out. Then she turns the plant over and cuts off the outside leaves with a broad stone knife. Enough of the outside is cut off to expose the white underpart. Then she brings it to the pit.

The pit is round, seven feet or more across and three or four feet deep. This hole is lined evenly with rocks. Then a big pile of wood is brought. This is put into the hole in criss-cross layers, first a layer one way and then a second layer the other. It is built up like this until the pit is just about full. Then more rocks are put on top of this wood. Fire is touched to it—from the east side first, then from the south, then from the west, and from the north. Then the woman who did this prays. They let the wood burn to ashes. Then they put the mescal in. Each woman will leave a leaf on her mescal heads in a certain place so that she can tell her own. Wet grass goes on top of the mescal, then dirt until no more steam comes out.

The smaller mescal they put in during the late afternoon and let them go all night. Sometimes they are ready the next day. To make sure, they take one out, and, if it is not ready, they put it back and let them all go for a while. How long it takes depends mostly on the size. The ones which grow to the south are larger. The largest ones take four days. Usually they take about two days.[9]

"The botton part of the mescal, the part that is put in the 251
oven, has to be eaten at once unless it is to be dried and preserved. It will spoil if it is not dried." Therefore, the leaves, called "wings," are peeled off and put in the sun to dry, and the softer centers are pounded into thin sheets and spread out in the sun. Juice, drained from pounded mescal suspended over a receptacle, is poured on the dried mescal sheets and forms a preservative glaze.

When the mescal is sufficiently dry and cool to transport, the homeward journey begins. Sometimes the "heads" are carried,

[9] One informant, a Central Chiricahua, told of a method of baking mescal without digging a pit. According to him, rocks are heated and scattered on the level ground, the mescal crowns are put on them, and fresh grass and dirt are piled over all. This "oven" has the appearance of a mound.

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the big ditches they used at Hot Springs." "We've had corn as long as I can remember." "The Eastern Chiricahua planted corn even in the old times." "All the groups of Eastern Chiricahua planted." Maize was undoubtedly the first vegetable raised. "When I was young," recalled a very old man, "we never had any cultivated vegetables except corn. Later others came from Old Mexico."

The influence of the Spanish-speaking peoples to the south in the impetus toward agricultural pursuits is admitted:

> The Eastern Chiricahua raised corn, pumpkins, potatoes, onions, chili, and watermelons. We had a good deal of contact with Spanish towns. We learned to speak Spanish, and the Spanish people showed us how to raise these things. We got the seeds from the Mexicans too. We got big hoes from them or traded them from the whites.

The Eastern band made good use of the intervals of peace:

> If a Chiricahua had a Mexican friend, he would get corn as a gift, and the Indian might give a horse or something else to the Mexican. We planted at Hot Springs as well as in Mexico. We received corn up here, as well as in Mexico, from the Mexicans living around. The Indians used to be good friends with the Mexicans often. When I was small I used to play with Mexican children. They gave me the name the white people call me by now.

The techniques of cultivation in use among the Eastern Chiricahua are described by an informant:

> We planted corn, cantaloupes, and watermelons. No squash or pumpkins were planted at first. Some Chiricahua never had pumpkins or squash until 1885 or 1886, except what they could get from other peoples.
>
> We used irrigation. We dug trenches from a stream to the farm and stopped these irrigation ditches with dirt when we wanted to block them. When the corn was big enough to hoe, we went out in the woods and made a hoe of bent root. Later we had hoes from the Mexicans. To make the holes for the seeds, we used just a pointed stick. The men worked in the fields; the women worked in the fields too, but mostly men did it.

Although this informant feels that agriculture is a legitimate activity for men, another disagrees, saying: "Planting was considered a woman's job. That is the way I feel. At Fort Sill men had to do it." "Men, women, and boys assisted," according to a third spokesman. Evidently, the division of labor in agricultural work was not clear cut.

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In discussing the various pollens used ritually, an informant included corn pollen and remarked, "You can get some pollen from corn; they used some of this a long time ago."

As in the case of other food products, it is the woman's task to cook and preserve the corn:

They would build a big fire and bring in load after load of the corn in sacks. Three or four women would work together. They would sit there and shuck corn and put it in the fire and let it get brown on top. Then they would throw it to a place where another woman sat. She would take the ears, cut off the kernels, put them on a clean hide, and throw away the cobs. Then they spread it out in the sun to dry. They would leave the corn out there for a week or two until it was very dry. They can carry that corn around then, and it won't spoil. It will keep for a year. They don't have to keep it in a cool place either. They store it in parfleches and use it in winter.

In the winter when the snow gets to be two or three feet deep, a man goes out and kills game and brings it in. Then they can use the dry corn with meat and bones, letting it boil together for three or four hours. It surely makes a good stew! We're using it right now, for we stored up last summer's corn. This dried corn is used at almost every puberty rite now too.

The dried kernels are also roasted or parched:

I saw my people cook corn in a shallow basket many times. They put several pounds of corn in the basket with some hot coals and keep working it around. The corn kernels split, and then they take them out and fill it up again.

Another corn dish reflects the influence of Mexican townspeople:

The Chiricahua never boiled the corn in the husks. They stripped off the husks. They cut off the corn kernels and piled them up. They ground the corn on a rock, using a big stone in the hand [mano and metate]. In those days flour was hard to get, and they made bread out of the ground corn. They used the corn husks to make a sort of tamale. They put some corn meal in a cornhusk and wrapped it up, tying it with a thin strip of cornhusk. Then they put it in water to boil with meat and bones. If they had chili, they put it in with the corn meal.

In season the corn is eaten fresh:

When they had the green corn, they cut the end off after husking it, broke it in two, and put it on to boil with bones or meat. In summer when the corn was ripe, they went out and brought in lots of it.

HOME INDUSTRIES OF WOMEN

In addition to her other tasks, the woman must furnish those things essential to the proper running of the household:

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462 313 [283] [281] Men can carry wood, but they think it is woman's work. The women make their own rope out of hide, a special rope. It is about five yards long and of hard rawhide. They soften it with brains just enough so they can tie it. The women use this rope for getting wood.

313 482 283 When a woman is going to get some wood, she doesn't carry great logs. She gets thin pieces of brush and sticks about three feet long and makes them into a bundle about a foot and a half thick. She ties the bundle at either end with this rope, leaving a rather long loop between. She puts the wood in a bundle on her back, and the rope comes over her shoulders and across her chest, or else just across her forehead.

A man could use this rope if he wanted to—to hobble horses for instance. But the rope is put where the woman can get it any time to carry wood. The man uses it only if he needs a rope in a hurry.

312 462 [415] The woman must keep on hand a plentiful supply of water for drinking, cooking, and washing. She brings it from a near-by spring or stream in a pitch-covered basketry jar.

281 [462] [1173] *Tanning and the use of hides.*—"Tanning the hide is always considered woman's work. Men never do it." In the mythology, when Woodpecker wishes to deceive Coyote and make him think he is a girl, he scrapes a hide after the fashion of women. Yet certain realistic concessions are made. "Sometimes a man helps if it is a hard job, a big hide; he helps stretch it because it takes great strength."

The fresh pelt is treated in this manner:

[412] [178] First the woman who is doing the tanning scrapes off the flesh with a sharpened deer bone or a sharp-edged stone. (At present she uses a scraper with a toothed metal blade.) Then she soaks the hide in water for two or three days—not too long or it will spoil. To soak the skin, she uses a basin formed of some stiff hide. Then she takes the skin out of the water and wraps it around a pole. She leans this pole against a tree so that the hide will not pull away. Then she scrapes downward with a sharpened horse rib and takes the hair off. She uses a rib near the neck because it is wider there.

When all the hair has been removed, she puts some grass on the ground and lays the skin on top of this grass with the inner side facing upward. She pegs it out here in the sun to dry for two or three days. If it is lumpy or too thick in places, she works it over with a rough stone to even it up and to soften it at those places.

The process of transforming the scraped hide into buckskin has been thus described:

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281 462 skin, the man cuts out the pieces to be used, and the woman sews them together.

281 386 The women color buckskin with a number of dyes of their own making. Dark brown is obtained from the juice of fresh walnut hulls, crushed and pressed. The buckskin is soaked in a mixture of the walnut-hull juice and water and is then re-worked to softness. Red is secured from the boiled root and bark of mountain mahogany. When this dye is lukewarm or cool, the buckskin is put in it and is left overnight or for a day; later it must be reworked with a stone until it is pliable. A yellow decoction is made by soaking algerita roots. The buckskin is left in the dye until it is yellow and is afterward pounded and softened. Yellow ocher is sometimes applied to the entire surface of a buckskin; as the color wears away, more ocher must be rubbed on.

294 237 283 Sewing is essentially the concern of the women, though men on the raid will do repair work. For thread, the woman needs sinew. Therefore the hunter, when he butchers an animal, always removes the sinew from the loin very carefully and presents it to his wife. Sinew from any large game animal is acceptable, though that from the deer is considered best. In recent times [178] sinew from the horse and the steer have come to be widely used. [412] With an awl made from the sharpened leg bone of the deer, the woman punches a hole in the skin she is sewing, moistens the end of the sinew, and runs it through the hole.

285 [462] [824] *Basketry.*—Basket-making is one of the many tasks for which the woman supplies both the materials and the labor, and she possesses a large fund of knowledge concerning substances and techniques. She rarely uses cottonwood, since it breaks too easily. She does not use willow unless no other materials are available. She knows that, if she gathers stems in the spring, she will have to let them dry for some days but that, if she takes them in the winter, they are dry enough to use almost at once.

285 824 The woman makes a coiled tray basket with sumac stems for the foundation and yucca leaves for the sewing material and designs it with yucca of various colors:

> To turn the yucca yellow, put dry grass among the leaves in the yucca plant while it is standing in the ground; then set fire to the grass. The fire and smoke

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323 [463] [438] things. They agreed on some reasonable settlement. Some unmarried women got along this way. Men did not assist in pottery-making.

According to another recital, a vegetal binder was actually mixed with the clay in some instances:

Get red or dark clay and grind it on a metate. See that no pebbles or sticks are in it. Then get a low-growing cactus plant. Split it and boil down some of it. Get the juice from it, mix it with the clay, and work it until it gets to the right consistency. Just work the bottom from a lump and then build the side out of coils. The inside is smoothed out with the hands. The outside is smoothed with the hands too but is finished with a bone. Handles are sometimes put on the sides.

[531] Pots are sometimes designed. They are not painted but are incised with the fingernail. One design is a series of circles connected by a line. Another is a band across the pot with vertical lines on it. Sometimes they put a saw-toothed design on. They also make a clay water jug with lines running around it.

When it is the right shape, they leave the pot in the sun to dry. Often this takes several days. They strike it with a stick to hear whether it makes the proper sound. Then they know it is ready to fire. They build a fire. When it has burned down some, they put logs over it. They put the pots on the logs and keep them there for about an hour and then turn them.

Different shapes are made. There is a tall cooking pot. After it is used for a while it turns black. You can boil things in it. It is never decorated at all. The shallow ones are used for drinking, and some shallow ones are made large enough for food containers or frying pans.

415 412 824 In addition to the vessels already described, the woman makes dippers, spoons, and various receptacles of gourds, wood, and leaves:

From Old Mexico we get gourds for carrying water. We use them as dishes too, and you can drink from them. But you can't use them for cooking. The little gourds from the United States are too small and are not strong enough for use.

The bole from the oak tree is hollowed out and used for a vessel or dipper. We use the growths from the walnut tree too, or from any tree that has them. I've seen my aunt use them many a time. For a spoon we make a hollow at the end of a stick. Broad yucca leaves are used for spoons too.

412 To grind seeds and to pulverize foods that are to be preserved, the woman uses a mano and metate:

[172] Not many women make grinding-stones. They find some which have been left by a people called "the ancient people." These were not Chiricahua, according to the story. They lived in Old Mexico in cliffs and stone houses. We also call them "those who live on top" and "[square] house people." These metates

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are too heavy to carry along. But we take the mano which is ready made and carry it along often. Then the woman uses it on a flat rock or one with a shallow depression.

Some metates are fashioned by the women for themselves, however:

These metates are about two feet long and one foot wide. They have a little depression which the woman makes by pecking it out with another stone and then rubbing it smooth. A woman has just one grinder on which she grinds the same food several times if she wants to make it finer.

Some women carry these all the time. It all depends on how often we move and how far we are going. The mano used with this grindstone is about six or eight inches long, just long enough so that a woman can work with two hands. Chiricahua women kneel when grinding. We have no grinding songs.

A pounder of animal bone, or one of a stone selected because its shape conveniently fits the hand, is another utensil with which the woman equips herself.

Housebuilding.—The woman not only makes the furnishings of the home but is responsible for the construction, maintenance, and repair of the dwelling itself and for the arrangement of everything in it. She provides the grass and brush beds and replaces them when they become too old and dry. With a stiff grass broom or with a leafy branch, she sweeps out the interior if that is necessary. However, formerly "they had no permanent homes, so they didn't bother with cleaning."

The dome-shaped dwelling or wickiup, the usual house type for all the Chiricahua bands, has already been described.[15] But a "peaked" home of brush, roughly resembling a conical Plains tepee in shape is also made. Said a Central Chiricahua informant:

Both the tepee and the oval-shaped house were used when I was a boy. The oval hut was covered with hide and was the best house. The more well-to-do had this kind. The tepee type was just made of brush. It had a place for a fire in the center. It was just thrown together.

Both types were common even before my time. For the girl's puberty rite the tepee type was used. Ten or more poles are used in the tepee. The number depends on the person who makes it. It is woman's work to do it, though sometimes the men would help a little.

[15] See pp. 22–23.

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A man must not only be able to make arrows but to use them effectively. In times of peace he keeps in practice by frequent competitions with his fellows. "If a man is expert, he can shoot one arrow, then shoot two more into the air before the first one comes down." Significant personal differences are found in the ability to make and handle bows and arrows. Some men are acclaimed as experts; others are credited with fair performance; while still others are rated decidedly below average.

The quiver and the bow cover are usually made at the same time and of the same material; they are always attached and are both called by the same term, literally "arrow container." Mountain lion skin is the favorite material for the quiver because it is thought that "it makes a man lucky." The fur and the tail are left on, and the finished product is called "quiver with tail." Deer, antelope, otter, and wildcat pelts, with the fur either scraped off or left on, are also used for quivers. Recently hides of cattle and horses have been used, usually without the fur. One informant asserted that the skin of a fetal calf makes a good quiver.

The man cuts a wristguard out of rawhide for himself. This laces up the back of the left wrist and has a projecting piece which protects his hand against the impact of the bowstring.

For a spear a man selects a sotol stalk or a young spruce, scrapes and dries the wood, and sharpens and fire-hardens the tip. Such spears are about seven feet long. The shaft is usually painted in one or more colors, and two eagle feathers are attached near the point. After contact with Europeans, metal knives and bayonets were inserted to make a still more deadly weapon. In battle the spear is never hurled, and it is used by the warrior only when he is on foot.

The round hide shield is connected as much with ceremonialism as with actual defense. It, too, may be a recent acquisition:

> Just those with power have them. The man with power prepares these hides himself. He uses the hide from the shoulder region of the animal. He makes it just big enough to protect his chest and face.
>
> First he takes the hide off. Then he scrapes all the flesh from it. He does this with a knife, a steel knife. (They made this shield only from the time they had steel knives and not before.)

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Pitch has been applied to the inner surface of the split, and the stone is held in place by sinew bindings on either side of it. Often an animal tail is attached to the end of the handle. An ax of this type, without the tail or any decoration, may serve around camp as a household tool.

The man makes for his own use a sling, a diamond-shaped piece of rawhide, pounded a little and thus softened, with four perforations through the median line of its width. A rawhide string is attached to each side, one with a loop at the end and the other without any. Because of the perforations, the sling can be folded over a stone about two and a half inches long and one inch thick. The loop is placed on the middle finger of the right hand, and the free string is held between the thumb and first finger. The sling is drawn back and whirled just once. As it comes forward the unlooped string is released, hurling the stone.

There are slings of two sizes that the Chiricahua carry. One is for things close by and is short. The other is a long one, for long-distance shooting. You can get to be very accurate with a sling. You never whirl the sling around a lot, as the stone might come out and hit someone. It just goes back once, and then you let it go. You can hurl a stone a hundred and fifty yards with it. It can be used for hunting birds or deer alike.

Finally, there is the stone knife, chipped with another stone. "They used to chip off the hardest rock they could get and use it for a knife." This knife may have a shoulder jutting from the handle end so that it can be tied to the belt or waist, or it may be carried in a rawhide sheath made by the woman.

A man makes a long rope from a piece of buckskin or rawhide by cutting it in a continuous clockwise circle from the outer rim to the center. To form an especially strong rope, he braids several strands of rawhide together. Such a cord or one braided from horse-tail hair makes a serviceable bridle. By shredding yucca leaves and braiding the tough strands, he makes a durable rope which also can be used for tying and hobbling horses or for a bit and bridle.

"Anyone could build a fire. Whoever woke up first did it. A woman can use the fire drill." Yet the fire drill is made by the man and is employed by him most frequently:

411 [314] [237] [412]
[223] [224]
411 412 [324]
237 283
283 824 492
372 [462]
1

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[facing p. 395]

PLATE XIV

411
412
392

Museum of the American Indian, Heye Foundation

a) FIRE DRILL, HIDE-SCRAPER, AND KNIFE SHEATH

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492
531

United States National Museum

b) SADDLE BAG

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If it rained we had a slow-burning fuse that kept a fire going. And when it burned to the end we lit another from it. Thus we kept a fire burning at a rainy time. To play safe, we usually took these fuses along with us in case of emergency, especially if it looked like rain. 372

Since the operation of the fire drill is considered hard work, whenever there is a chance of getting fire by other means, these are attempted first. It is not unusual, for instance, to send some member of the household to a neighboring camp to borrow fire. He "carries a hot coal between two sticks and runs back to his camp. Mesquite wood will burn the longest when carried this way."

Equipment for the horse.—There is a tendency to associate the horse with the man and his affairs. Women obtain horses by gift and in payment for services, particularly ceremonial services, but the majority of the horses remain in the possession of the men: 231 [562] [425] [422]

Caring for stock is man's work. Men round up the horses and cattle. When a horse is to be loaded, the woman gets the pack ready, but the man does the loading. Men make the saddles, and they saddle the horses for themselves and their wives. The women know how to saddle horses, however, and can do it when necessary. A woman might saddle a gentle horse. A widow has to saddle her own horse. [462]

It is the business of the man to furnish the equipment needed in making use of the horse—the saddle, stirrups, bridle, bit, and quirt. [492] [462]

The saddle, which is modeled after European examples, has a cottonwood framework. Tree forks are whittled down to form the front and cantle. On the front a projection is left for the horn. Two flat boards are lashed between these forks, one on either side, to form the saddle skirts. Wet hide, often with the fur left on, is stretched over this frame and laced into place. As it dries, it contracts and fits securely. When metal tools came into use, the pieces of the frame were joined still more solidly by burning holes through the wood with a red-hot metal punch and drawing rawhide laces through them. 492 [177] [322] [281] [412] [322] [177]

The man also makes a pack saddle, little more than a pad or frame of grass or hide bundles. He makes, too, rounded oak stir-

1:Opler E-5 (1931-1937)1941
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484 were in use, for, if some member of the family should die and the bed is not taken
[765] apart in this manner, it would be at the last camp site as it was when it was used
[513] by this dead person and would remind others of the user. This causes sorrow to friends and relatives.

821 There are a number of methods for reckoning time, so that
805 movements and meetings may be planned and ceremonies performed according to a schedule:

During the day, time is judged by the shadows caused by the sun. It is noon when the shadow drops just under you. Some people place a stick upright in the ground and watch the movement of the shadow to figure out the time of day. Another way is to note how many fingers the sun is above the horizon. On cloudy days you have to guess at the position of the sun.

We notice the shortening of the days as winter gets near. As soon as the days begin to lengthen, we say, "It [the sun] has begun to move back upward."

During the night we tell time by the position of the moon and the morning star. In wintertime the morning star gets as high as halfway between the horizon and the zenith. When it is in this position, it is nearly morning.

The Big Dipper is used in telling time at night. "As its stars 'spin around' it is possible to tell the passage of the night by whether the cup is turned or not." "The Dipper turns around and faces down; this takes all night." Another group of stars consulted for the time of night is the Pleiades. "You can see it early in the evening in winter in the east. When it is high, morning is near."

821 Stars that appear at certain seasons are noted. "There is a star that is right straight up in the summer. We call it 'rock bed' after the rocks at the bottom of the mescal pit."

264 Members of the household usually eat two meals together, although sometimes individuals eat during the day as they get hungry and gather for an evening meal only:

We never followed the three-meals-a-day idea at home or away. Even in the morning there wasn't a regular meal unless there was meat that had to be boiled and eaten warm. Then we would eat together for convenience. Otherwise there
[178] was no system. Three meals a day is recent. At home, in everyday life, the women eat with the men, but at social dances and feasts they do not.

[412] Each person helps himself from a common container, using his
[824] fingers for solid foods and a yucca blade spoon for liquids. Though "it is considered impolite to make a noise while eating,"

2: Castetter and Opler N, E-5 (1931-1934)1936
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MATERIAL CULTURE

It will be understood that a people who lived by hunting and gathering, whose contacts with nature were so close and exacting, and whose food quest demanded much movement, could not develop a very elaborate material culture. The characteristic dwelling of these Apache tribes was a dome-shaped structure covered with grass thatching, hides, or bark. Household utensils included a pitch-covered woven water jar, coiled basket trays, and large burden baskets of twine work. There were dippers and spoons of split gourds, and ladles of split mountain-sheep horn. Metates and manos were found in the surrounding country and brought to camp, or crude ones were fashioned by the Apache themselves. For household purposes the Apache made rock pounders and stone axes hafted to wooden handles. Occasionally an Apache woman made a few clay pots, but because of the breakage of this ware that attended the roving life, it was found to be an unprofitable procedure. On the march these people carried water containers made from the stomachs or intestines of animals.

There was a distaff-type twisting tool which wound together buffalo or horse hair into rope. Ropes of twisted rawhide were also widely used. Long strips of yucca and mescal leaves were used for binding material. Sinew from the loin and leg of the larger game animals was shredded for thread. Women had a special rawhide rope for wood-carrying and some had a special conveyor of wood and rawhide for this purpose.

The lower leg bone of the deer was ground down to make a drill. Later the iron-tipped arrow was used as a boring tool.

In connection with the horse complex, the men made their own whips, saddles, stirrups, cinches, bridles, saddle bags, and even made rawhide bags which were tied over the hoofs to prevent or cure lameness of horses.

For purposes of grooming, combs of mountain mahogany *(Cercocarpus montanus)* and brushes of folded and pounded mescal or sotol leaves were made.

2: Castetter and Opler N, E-5 (1931-1934)1936
NT8 Eastern Apache NT8
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243 [648] [177] [412] ernment control. In those days the settlers planted corn far from the houses. It was easy to get, and we got it from the south (Mexico) mostly. We had just a digging stick—no hoe. With this we made holes and planted the corn shallowly, about four or five seeds to one hole. Pulling the weeds was about all the care we gave it. We might be traveling around but we came back to it at the time we knew it would be ready to harvest. My people used no irrigation then. This went on before my time, when my father was a boy too, and before his father's time. The Mescalero planted around Tularosa, New Mexico, and La Luz at that time."

The same informant told how wheat seed, obtained from Mexico during raids or from the early settlers, was planted in sandy loam, harvested by beating it with a stick, and made into bread.

241 177 [439] [412] Later, in the early 1870's, when the Warm Springs Apache were given a separate reservation near Hot Springs, they turned more to agriculture and considerably refined these haphazard methods. Under the influence of neighboring Mexican towns with which they carried on trade, they began to use hoes shaped out of the bent root of a tree, and later obtained hoes of Mexican manufacture. Watermelons and cantaloupes were raised as well as corn, and later beans, pumpkins, potatoes, chile, and squash. Irrigation was now regularly adopted, trenches being dug from the water supply to the field, and stopped up with earth when the land was sufficiently watered. Maize kernels and beans, to be used for seed, were sometimes soaked all night in water to make them sprout faster and then dropped two or three in a hole. Pumpkin and watermelon seeds were often soaked like this before planting too. When the seeds were soaked beforehand they were not planted so deeply as when they were planted dry.

241 [462] Agriculture never became important enough for the Apache to consider it one of the manly arts. Both sexes took part in the task of planting, but the weeding, harvesting, and preparation were left almost entirely to the women. Agriculture has never exerted influence enough to figure

2: Castetter and Opler N, E-5 (1931-1934)1936
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PLANTS USED BY THE MESCALERO AND CHIRICAHUA APACHE FOR FOOD, DRINK, AND NARCOTICS

Foods

The stately Agave, a characteristic feature of desert vegetation of southwestern United States, constituted a very important source of vegetal food for these Apache. Several native species were utilized, but the most abundant one in the area was *Agave parryi*, commonly known as mescal or century plant (although these common names apply equally well to several other species). Contrary to popular opinion, the Agave bloom in much less than one hundred years; however, each plant blooms only once, after which the leaves wither and die. Around the dead plants are usually to be seen a number of young plants formed from suckers of the parent plant. It is from the food itself, known as mescal, prepared from *Agave parryi*, that the Mescalero Apache have been given their name *(28:*455).

Although not so extensively as formerly the Apache women still make expeditions to regions where Agave grows in abundance for the purpose of collecting the edible portions of the plant. These visits are usually made in late May or early June when the reddish flower stalks begin to appear and the plants are most palatable. Plants not blooming are known as "man" plants; those bearing a flower stalk are designated as "woman," and the Indians advise against using the "man" plants for food since they are bitter and spoil all mescal with which they are baked. This is because the "man" is smoking and the smoke permeates all the mescal in the pit. The "man" changes into "woman" when it flowers, then dries up and is gone.

The crowns of the mescal plants are dug out with three-foot sticks cut from oak branches *(Quercus* sp.) and flattened at the end. This end, when pounded with a rock into the stem of the plant just below the crown, permits the crown to be removed readily. A broad stone knife is used

2: Castetter and Opler N, E-5 (1931-1934)1936
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252 to chop off the leaves, two being left for tying the crowns
[412] together, thus making transportation more convenient. The naked crowns are bulbous, white in color, and from one to two feet in circumference.

Pits in which the crowns are baked are about ten to twelve feet in diameter and three or four feet deep, lined with large flat rocks. On the largest rock, which is placed in the center, a cross is made with black ashes. Rocks are piled on the flat stones, but care is always taken that the
252 top shall be level. Upon this, oak (*Quercus* sp.) and juniper
824 wood (*Juniperus* sp.) are placed. Before the sun comes up this is set on fire and by noon the fire has died down.

On these hot stones is laid moist grass, such as bunch-grass (*Sporobolus airoides*), side-oats grama (*Bouteloua curtipendula*), Texan crab-grass (*Schedonardus paniculatus*), big blue-stem (*Andropogon furcatus*), mesquite grass (*Muhlenbergia wrightii*), marsh foxtail (*Alopecurus aristulatus*), *Muhlenbergia neomexicana*, or the leaves of bear grass (*Nolina microcarpa*), but bear grass is usually pre-
[788] ferred since it does not burn readily. The largest mescal crown is selected and a cross made on it with tule or cat-tail pollen (*Typha latifolia*), when this is available, the pollen always being placed on the crown from East to West and
252 from North to South. The Indians then pray. Holding the
[782] large crown toward the opening of the pit four times, they toss it in and throw the other crowns in after it. Next they have the youngest child present stand at the east of the pit and throw four stones into it. It should be made clear that this little ceremony held at the time of baking varies among different family groups and the above description should be regarded as one of a type rather than a fixed performance. After the mescal has been covered with the long leaves of bear grass and the whole with earth to a depth sufficient to prevent steam from escaping, the crowns are allowed to bake the rest of the day and all night. Early in the morning the
[27] pit is opened and a crown examined and eaten. The pit is
[784] again closed and the Indians refrain from drinking until
[821] noon of this day so as to prevent rain.